

IN THE CLAIMS:

The text of all pending claims are set forth below. Cancelled and withdrawn claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (previously amended), (cancelled), (withdrawn), (new), (previously added), (reinstated - formerly claim #), (previously reinstated), (re-presented - formerly dependent claim #) or, (previously re-presented). Please CANCEL claim 5, AMEND claims 1 and 6-14 in accordance with the following:

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1. (CURRENTLY AMENDED) A word recognizing apparatus, comprising:
a listing unit storing a list of at least one candidate word comprising a plurality of characters;
a dictionary unit storing feature amounts of a plurality of characters;
an extracting unit extracting a feature amount from a recognition target by a process in which the recognition target is not required to be divided into units even if the recognition target comprises a plurality of units;
a generating unit referring to the list of at least one candidate word stored in said listing unit, and dynamically generating a feature amount of only a candidate word registered in the list by a composition operation using the feature amounts of characters stored in said dictionary unit during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting unit; and
a collating unit collating the generated feature amount of the word with the feature amount extracted from the recognition target, and outputting a recognition result.

2. (PREVIOUSLY AMENDED) The word recognizing apparatus according to claim 1, wherein said collating unit includes a memory storing the feature amount of the word, and releases the memory when a collation of the feature amount of the word is completed.

3. (PREVIOUSLY AMENDED) The word recognizing apparatus according to claim

1, further comprising:

an inputting unit inputting an image as the recognition target; and
an extracting unit performing a one-dimensional gradating conversion in a direction perpendicular to a connecting direction of characters for a direction code histogram of a contour line in each of a plurality of small areas in an inputted image provided that no gradating conversion is performed in the connecting direction of the characters, and extracting a direction code histogram series obtained from a conversion result as the feature amount of the recognition target.

4. (PREVIOUSLY AMENDED) The word recognizing apparatus according to claim 3, wherein said extracting unit divides a length of the inputted image in the direction perpendicular to the connection direction of characters by a predetermined integer and divides the image into the small areas with an obtained quotient as a size of each of the small areas.

5. (CANCELED)

6. (CURRENTLY AMENDED) The word recognizing apparatus according to claim-5 1, wherein said generating unit generates a new direction code histogram series by arranging a plurality of direction code histogram series corresponding to the feature amounts of characters composing the word and ~~designating~~ designates a generated direction code histogram series as the feature amount of the word.

7. (CURRENTLY AMENDED) The word recognizing apparatus according to claim 1, wherein said collating unit performs a non-linear matching of the feature amount of the word and the feature amount of the recognition target such that a shift of the recognition target in a connection direction of characters is absorbed, and calculates a degree of similarity between the feature amount of the word and the feature amount of the recognition target.

8. (CURRENTLY AMENDED) The word recognizing apparatus according to claim 1, wherein said listing unit stores a plurality of lists of candidate words, and wherein said generating unit selects a list which has a high possibility of containing a word corresponding to the recognition target from among the plurality of lists according to a previous recognition result

and refers to the selected list.

9. (CURRENTLY AMENDED) A word recognizing apparatus, comprising:
a listing unit storing a list of at least one candidate word comprising a plurality of characters;
an extracting unit extracting a feature amount from a recognition target by a process in which a recognition target is not required to be divided into units even if the recognition target comprises a plurality of units;
a generating unit referring to a list of at least one recognition candidate word, and dynamically generating a feature amount of only a recognition candidate word registered in the list by a composition operation using feature amounts of characters during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting unit; and
a collating unit collating the generated feature amount of the word with the feature amount extracted from the recognition target, and outputting a recognition result.

10. (CURRENTLY AMENDED) A recognizing apparatus, comprising:
a listing unit storing a list of at least one candidate word comprising a plurality of characters;
an extracting unit extracting a feature amount from a recognition target by a process in which a recognition target is not required to be divided into units even if the recognition target comprises a plurality of units;
a generating unit referring to a list of at least one recognition candidate pattern string, and dynamically generating a feature amount of only a recognition candidate pattern string registered in the list by a composition operation using feature amounts of patterns during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting unit; and

pattern string

a collating unit collating the generated feature amount of the pattern string with the feature amount extracted from the recognition target, and outputting a recognition result.

11. (CURRENTLY AMENDED) A computer-readable storage medium on which is recorded a program causing a computer to execute a process, said process comprising:
storing a list of at least one candidate word comprising a plurality of characters;
extracting a feature amount from a recognition target by a process in which a recognition target is not required to be divided into units even if the recognition target comprises a plurality of units;

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dynamically generating by referring to a list of at least one recognition candidate word a feature amount of only a recognition candidate word registered in the list by a composition operation using feature amounts of characters during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting; and
collating the generated feature amount of the word with the feature amount extracted from the recognition target.

12. (CURRENTLY AMENDED) A computer-readable storage medium on which is recorded a program causing a computer to execute a process, said process comprising:
storing a list of at least one candidate word comprising a plurality of characters;
extracting a feature amount from a recognition target by a process in which a recognition target is not required to be divided into units even if the recognition target comprises a plurality of units;

dynamically generating by referring to a list of at least one recognition candidate pattern string a feature amount of only a recognition candidate pattern string registered in the list by a composition operation using feature amounts of patterns during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting; and

collating the generated feature amount of the pattern string with the feature amount extracted from the recognition target.

13. (CURRENTLY AMENDED) A recognizing method, comprising:
generating a list of at least one candidate pattern string comprising a plurality of characters;
generating a dictionary storing feature amounts of a plurality of patterns;
extracting a feature amount from a recognition target by a process in which a recognition target is not required to be divided into units even if the recognition target comprises a plurality of units;

dynamically generating by referring to the list of the at least one candidate pattern string a feature amount of only a pattern string registered in said list by a composition operation using feature amounts of patterns stored in said dictionary during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting;
and

collating the generated feature amount of the pattern string with the feature amount extracted from the recognition target.

14. (CURRENTLY AMENDED) A word recognizing apparatus, comprising:
a listing unit storing a list of at least one candidate word;
a dictionary unit storing feature amounts of a plurality of characters;
an extracting unit dividing a recognition target in units of meshes, a number of the meshes changed according to a length of the recognition target when the recognition target comprises a plurality of characters, the recognition target not required to be divided into units even if the recognition target comprises a plurality of units, and extracting a feature amount from the divided recognition target;
a generating unit referring to the list of at least one candidate word stored in said listing unit, and dynamically generating a feature amount of only a candidate word registered in the list by a composition operation using the feature amounts of characters stored in said dictionary

unit during a recognition process for the recognition target, the feature amounts of the word and characters and the composition operation determined such that the feature amount of the word generated by the composition operation matches a feature amount extracted from the word by said extracting unit; and

a collating unit collating the generated feature amount of the word with the feature amount extracted from the recognition target, and outputting a recognition result.